ABSTRACT

A flexible self-expandable stent which is made of a super-elastic shape memory alloy and used for insertion in the desired part of a contracted muscular passage, a contracted blood vessel, or an artery having an aneurysm so as to open the contracted part or repair the arterial dilatation. The stent has inside and outside stent bodies each fabricated by knitting first and second super-elastic shape memory alloy wires to make a net-like structure in that the first wire, which is zigzagged with a diagonal length P, is interlocked with the second wire, which is zigzagged with a diagonal length 2P, to form a plurality of interlocked points at which the stent bodies are contracted and expanded in a longitudinal direction. A repeated intersection of the first and second wires forms a plurality of intersecting points to allow the stent bodies to apply force against the longitudinal contraction of the stent bodies. The interlocked points and the intersecting points form a plurality of diamond-shaped meshes in the net-like structure of each stent body. A hollow rubber tube is closely fitted between the inside and outside stent bodies, with each of the overlapped ends of the rubber tube and the stent bodies being integrating into a single structure.